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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,125	02/19/2004	Ian Faye	2888	5226

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STRIKER, STRIKER & STENBY
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EXAMINER

ONEILL, KARIE AMBER

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/782,125	FAYE ET AL.	
	Examiner	Art Unit	
	Karie O'Neill	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Applicant's amendment filed on July 10, 2006, was received. Claims 1-15 are pending in this office action. Claims 1, 12 and 13 have been amended. Claims 14-15 have been added as new.

Election/Restrictions

2. Newly submitted claim 14 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The subject matter of the aforementioned claim is a fuel cell device having at least two fuel cell elements including a first fuel cell element having a higher power and a second fuel cell element having a lower power, which is a distinct species from "the fuel cell device comprising a fuel cell unit including at least two fuel cell elements" as recited in the original claim.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 14 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

3. Newly submitted claim 15 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The subject matter of the aforementioned claim is a fuel cell device comprising a fuel cell unit being

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formed so as to provide an operation for supplying heat, which is a distinct species from "the fuel cell device" of the original claim.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 15 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 8-10 and 12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Yi et al. (US 6,586,123 B1).

With regard to Claims 1, 12 and 13, Yi et al. disclose in Figure 1, a fuel cell device, comprising a fuel cell unit (10) including at least two fuel cell elements (12), which are electrically connected in series and referred to as a cell stack assembly (column 3 lines 4-7) and an electronic control unit or system controller (46) for controlling individual fuel cell elements of said fuel cell unit and having improved characteristics rendering them suitable for use in vehicles (column 1 lines 61-63).

With regard to Claims 2-4, Yi et al. disclose the electronic control unit (46) including at least one control element for controlling material streams of individual ones of fuel cell elements, primarily the control element being formed as a control valve (34) operable to regulate the pressure of the fuel reactant as it enters the anode. It is the position of the examiner that the control element being arranged between two of said fuel cell elements, are inherent, given that the control elements disclosed by Yi et al. and the instant application have similar material properties. A reference that is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. Inherency is not established by probabilities or possibilities. *In re Robertson*, 49 USPQ2d 1949 (1999).

With regard to Claims 8-9, Yi et al. disclose at least one pressure generating unit for generating at least two different operational pressures. The pump or blower (32) used to pressurize air oxidant is variable and connected with the controller (46). The pump (30) establishes a predetermined coolant water pressure in the coolant stream. The reactant gas streams typically have a greater pressure than the coolant gas stream (column 4 lines 4-12).

With regard to Claim 10, Yi et al. disclose wherein the fuel cell unit is formed to provide an operation for supplying current (column 5 lines 1-17).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yi et al. (US 6,586,123 B1), as applied to Claims 1-4, 8-10 and 12-13 above, and in further view of Menon et al. (US 2004/0146758 A1).

Yi et al. disclose the fuel cell device in paragraph 5 above, but do not disclose wherein at least two of said fuel cell elements are provided with different maximum electrical powers and wherein said fuel cell unit is formed so as to provide an operation for supplying heat.

Menon et al. disclose a fuel cell device wherein at least two of said fuel cell elements are provided with different electrical powers, the secondary fuel cell (40) is designed to operate differently from the primary fuel cell (22) (paragraph 0022), and wherein the fuel cell unit is formed so as to provide an operation for supplying heat as is provided by all exothermic reactions. Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to use two fuel cells provided with different electrical powers and for supplying heat with the fuel cell of Yi et al., because Menon et al. teaches the use of the primary cell to provide the primary electrical load and the secondary cell will provide a lower power to a load which requires less operating power.

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8. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yi et al. (US 6,586,123 B1), as applied to Claims 1-4, 8-10 and 12-13 above, and in further view of Hirschenhofer et al.

Yi et al. disclose the fuel cell device in paragraph 5 above, but do not disclose the fuel cell elements being provided with different catalytic coatings having at least different quantities of catalytic coating.

Hirschenhofer et al. disclose in Fuel Cells: A Handbook, low temperature and high temperature fuel cells require noble metal electrocatalysts to achieve practical reaction rates. Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to use any variety of catalytic materials and in a variety of quantities in the Yi et al. fuel cell, because Hirschenhofer et al. teaches the use of catalysts in fuel cells no matter the size or type of fuel cells being used in conjunction with one another.

Response to Arguments

9. Applicant's arguments, see pages 6-19, filed July 10, 2006, with respect to the rejection(s) of claim(s) 1-5 and 8-13 under 35 U.S.C. 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Yi et al. (US 6,586,123 B1).

10. Applicant asserts that the at least two fuel cell units in the Menon et al. reference are not electrically coupled to one another. Examiner agrees with this assertion and

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has withdrawn the rejection of Claims 1, 12 and 13. However, new prior art has been applied in the rejection of these claims.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571) 272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karie O'Neill
Examiner
Art Unit 1745

KAO


DAH-WEIYUAN
PRIMARY EXAMINER